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Predictors of Pro-environmental Behaviour: A Capability Perspective

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Agenda

I. Capability Approach (CA) and Sustainable Development (SD)

I. Theory of Planned Behavior (TPB)

I. Pro-environmental behaviour (PEB): Empirical results from GSOEP-IS

I. Discussion

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I Capability Approach & SD

- Linking the Capability Approach & Sustainable Development: 2 ways

- I) Capabilities provide the metric of SD („What should be preserved?“) → shift from needs (Brundtland) to capabilities/ functions → focus on freedom in defining SD → CA accounts for sympathy and commitment as opposed to ego-focused approaches

- II) CA provides a measurement heuristic for SD → CA functions as a modeling framework, identifying opportunities and constraints for e.g. pro-environmental behaviour

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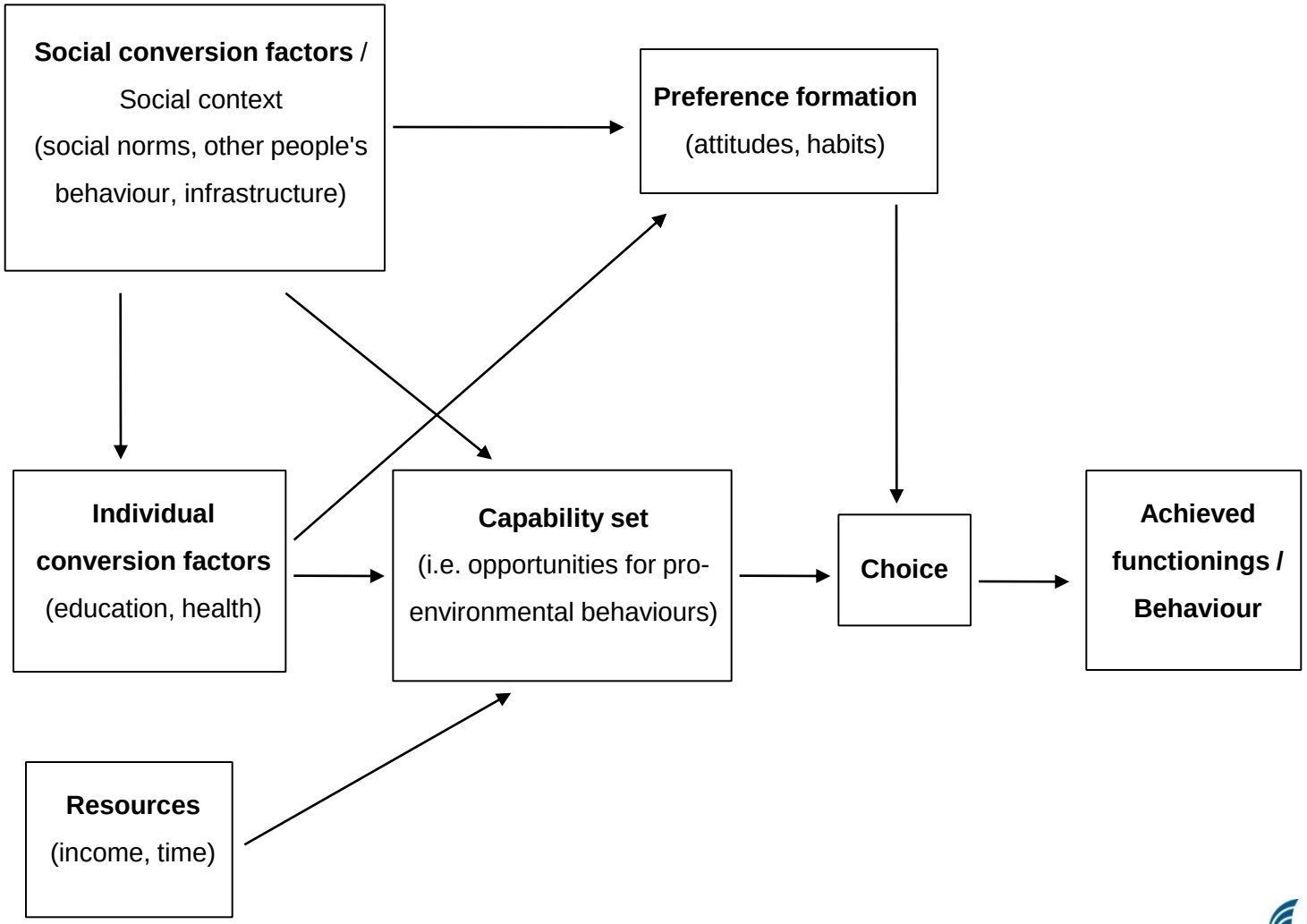
I Capability Approach & SD



Adapted from Robeyns (2005)

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II Theory of Planned Behavior (TPB)

- Social cognitive approach → developed by Ajzen (1988, 1991) → based on Theory of Reasoned Action (Fishbein/ Ajzen) → TRA/TPB qualifies attitude-behaviour relationship
- Widely used in research on pro-environmental behaviour
- 3 proximal predictors of behavioral intentions → attitudes, social (subjective) norms, perceived behavioral control → intentions mediate influence of predictors on behaviour
- Several extensions of TPB → e.g. descriptive & personal

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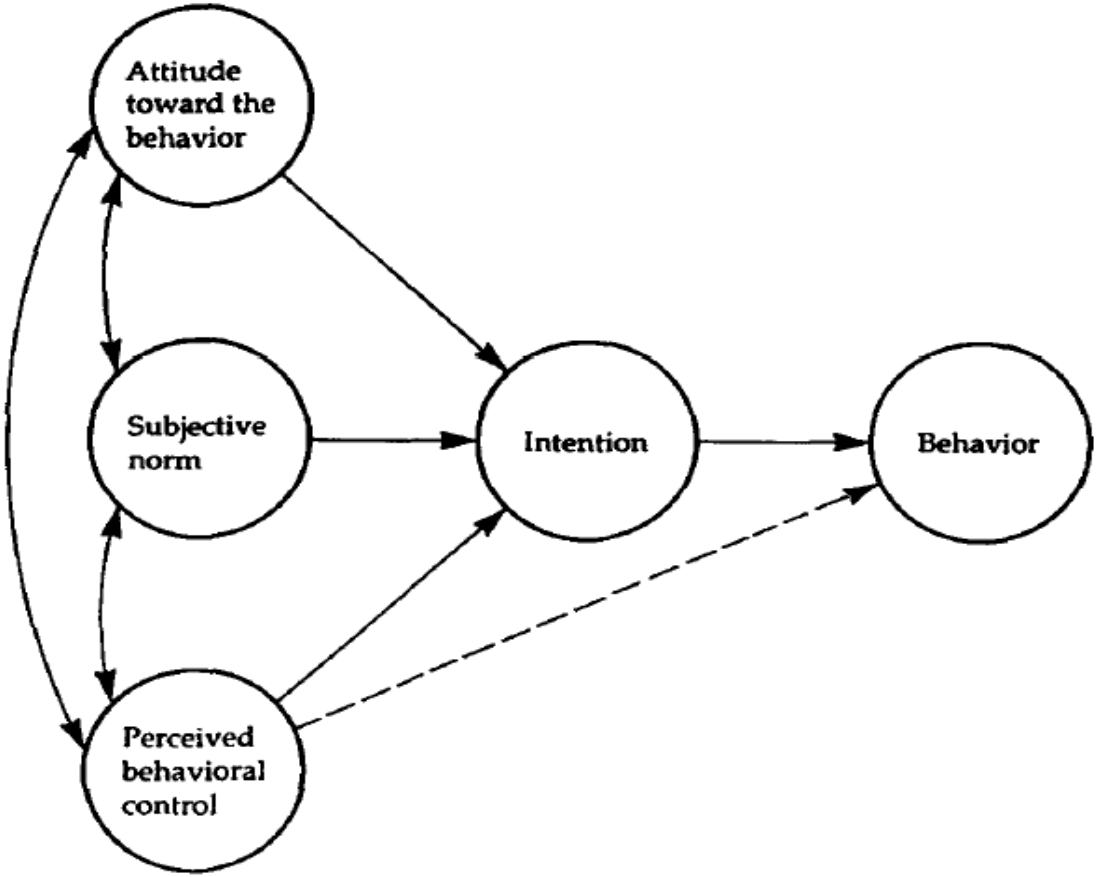
II Theory of Planned Behavior (TPB)



Taken from Ajzen (1991)

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III Empirical results (GSOEP-IS)

- Analysis of general environmental behaviour (GEB) → based on the data of Kaiser/Ott → GEB = cumulative index of environmental behaviours with various difficulties
- 6 behavioral domains: mobility, energy, consumption, recycling, waste, general pro-environmental behaviour
- Specific analysis of GeNECA data on purchase of organic food and use of public transport / bike for inner-city rides

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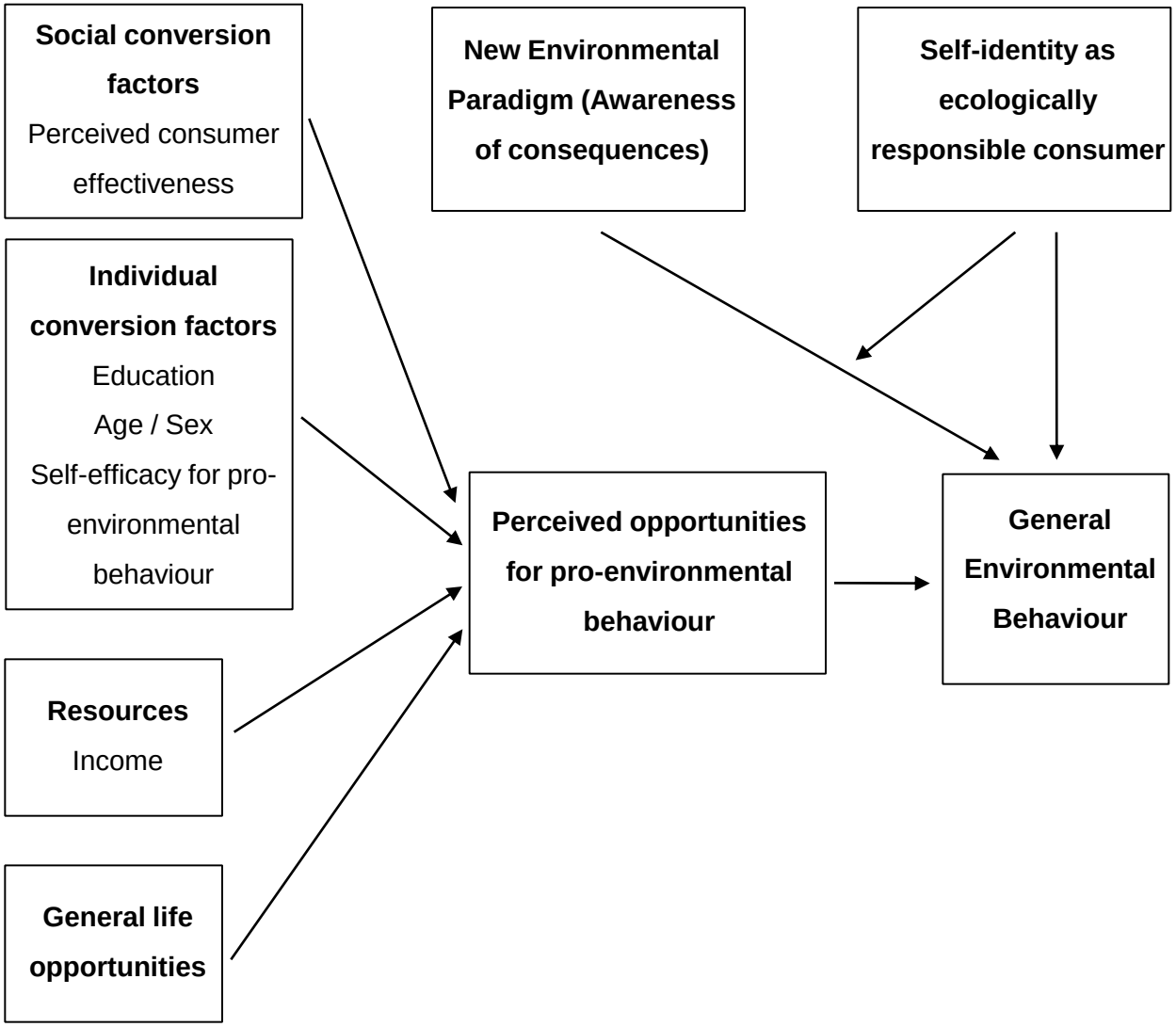
III Theoret. framework pro-environm. behaviour



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III General Environm. Beh.: Method / Measures

- Correlational design, n = 433 (219 with income)

- Dependent measure: frequency of approx. 20 environmental behaviours

- Independent measures:

Resources: Monthly income

Individual conversion factors: Age, sex, education, self-efficacy for pro-environmental behaviours (1 item: "How much can you contribute to environmental protection?")

Social conversion factor: perceived consumer effectiveness (1 item: "How much can consumers contribute to environmental protection?")

III General Environm. Beh.: Method / Measures

- New environmental paradgim (NEP, Dunlap et al. 2000): 15 items (α =.77), measures perceived human impact on nature (environmental concern)

- Self-identity as ecologically responsible consumer (Whitmarsh/O'Neill 2010, 4 items, α =.74, e.g. „Protecting the environment is important to me“)

- General life opportunities (8 items, α =.82, opportunities for income, healthy lifestyle, social contacts, education etc.)

- Mediator: Perceived opportunities for pro-environmental behaviour (1 item, „How big are your opportunities to behave environmental friendly?“)

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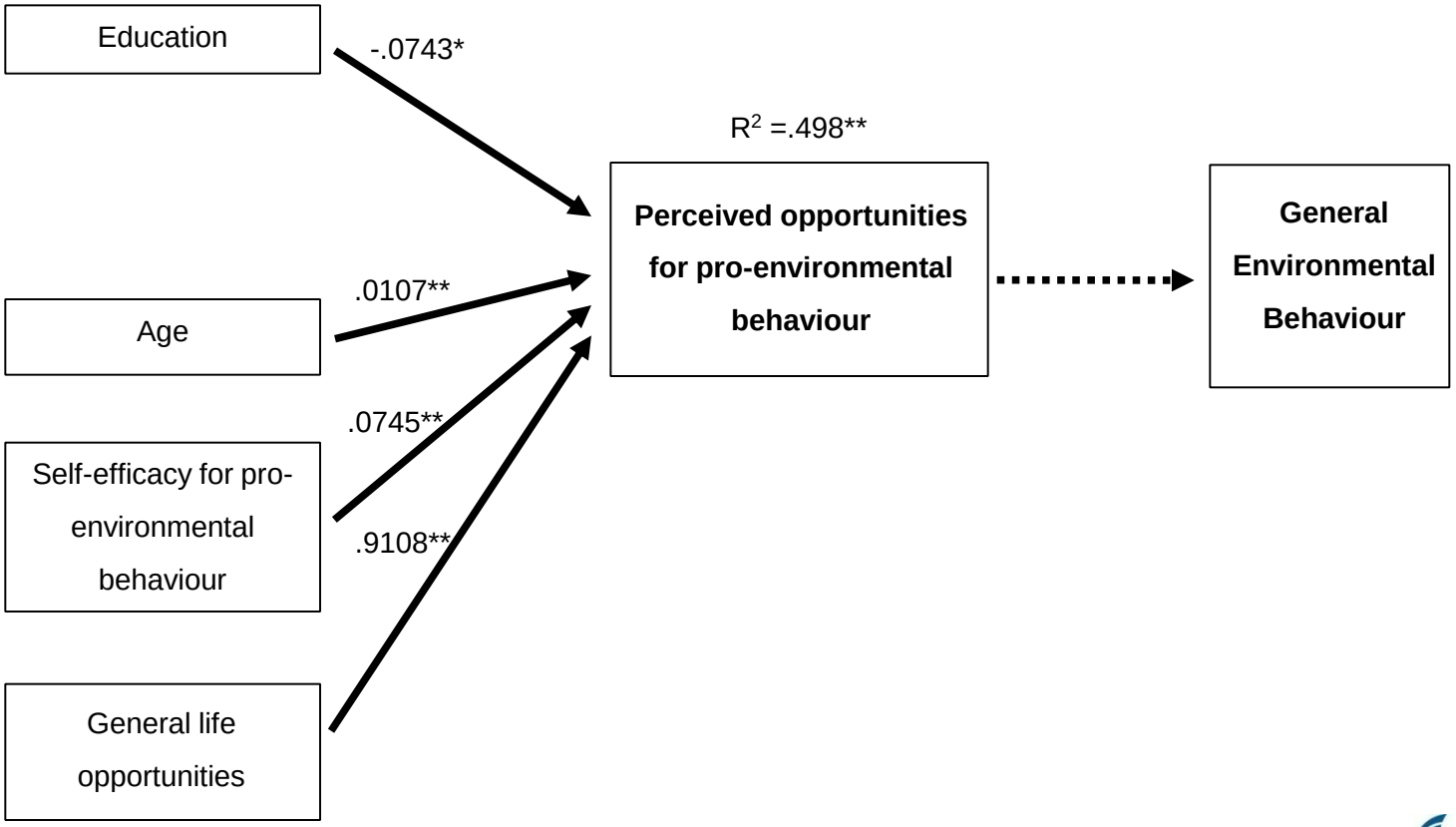
III GEB: Empirical model I



** p < .001 * p < .01

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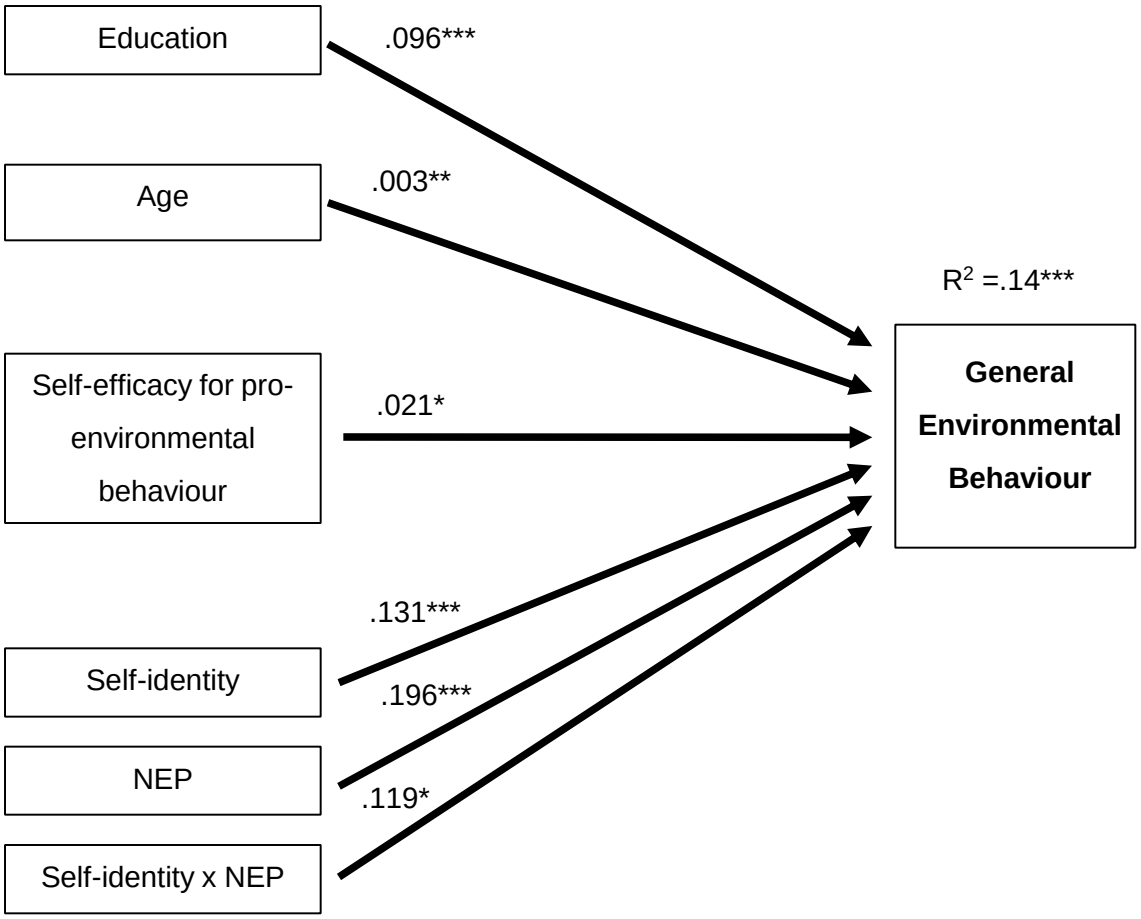
III GEB: Empirical model II



*** p < .01 ** p < .05 * p < .1

III Summary General Environmental Behaviour

- Direct positive effects of education, age, self-efficacy beliefs, self-identity as environmental responsible consumer and NEP on GEB-scale → no effects of income on GEB
- Moderator effect of self-identity on NEP → stronger relationship between NEP and GEB at higher levels of self-identity as envir. resp. consumer
- Effects of resources, individual and social conversion factors are not mediated by perceived personal opportunities for pro-environmental behaviour

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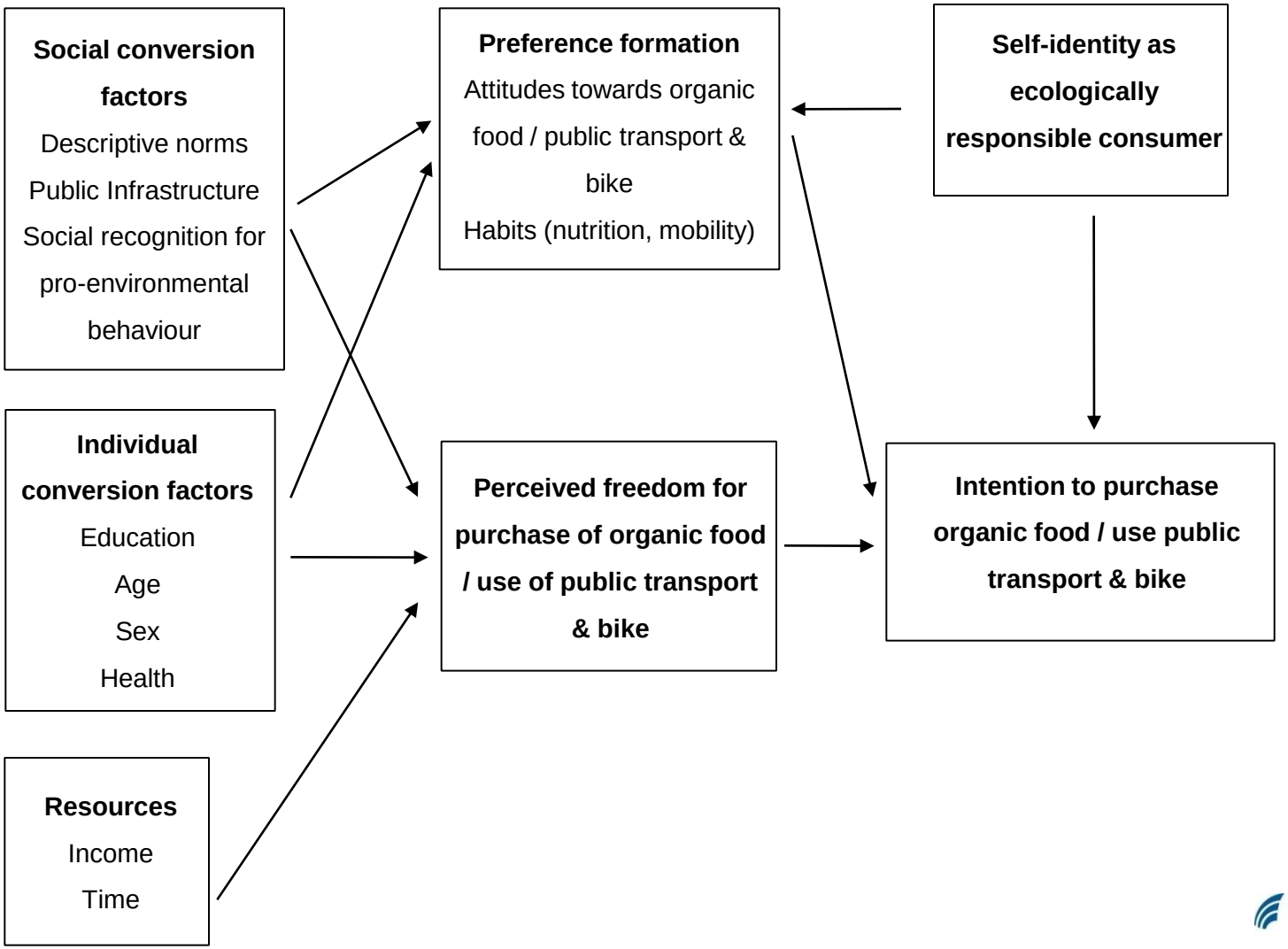
III Theoret. framework pro-environm. behaviour



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III Specific PEBs: Methods / Measures

- Dependent measures:

  Intention to buy organic food / use public transport (1 item: "How often do you intend to … within the next 2 months?") Frequency of purchase of organic food / use of public transport & bike (1 item, „How often have you … within the last 2 months?")

- Independent measures:

Resources: perceived financial and time barriers for purchase of organic food / use of public transport & bike

Individual conversion factors: Age, sex, education, perceived health barriers for use of public transport

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III Specific PEBs: Methods / Measures

- Social conversion factors: descriptive norms for purchase of organic food / use of public transport & bike (1 item, „Most of the people, who are important for me, buy organic food / use public transport for inner-city rides.”), perceived infrastructure barriers for purchase of organic food / use of public transport

- Attitude towards organic food / public transport & bike (2 items, e.g. „Purchasing organic food is good.“)

Habits: perceived habit barriers for purchase of organic food / use of public transport 6 bike (1 item, „Purchasing organic food / using public transport is against my habits.“)

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III Specific PEBs: Methods / Measures

- Social recognition for purchase of organic food / use of public transport & bike (1 item, „Others have recognized that I purchase organic food / use public transport.“)

- Perceived freedom for purchase of organic food / use of public transport & bike (1 item, „How much freedom do you have to buy organic food / use public transport for inner-city rides.”)

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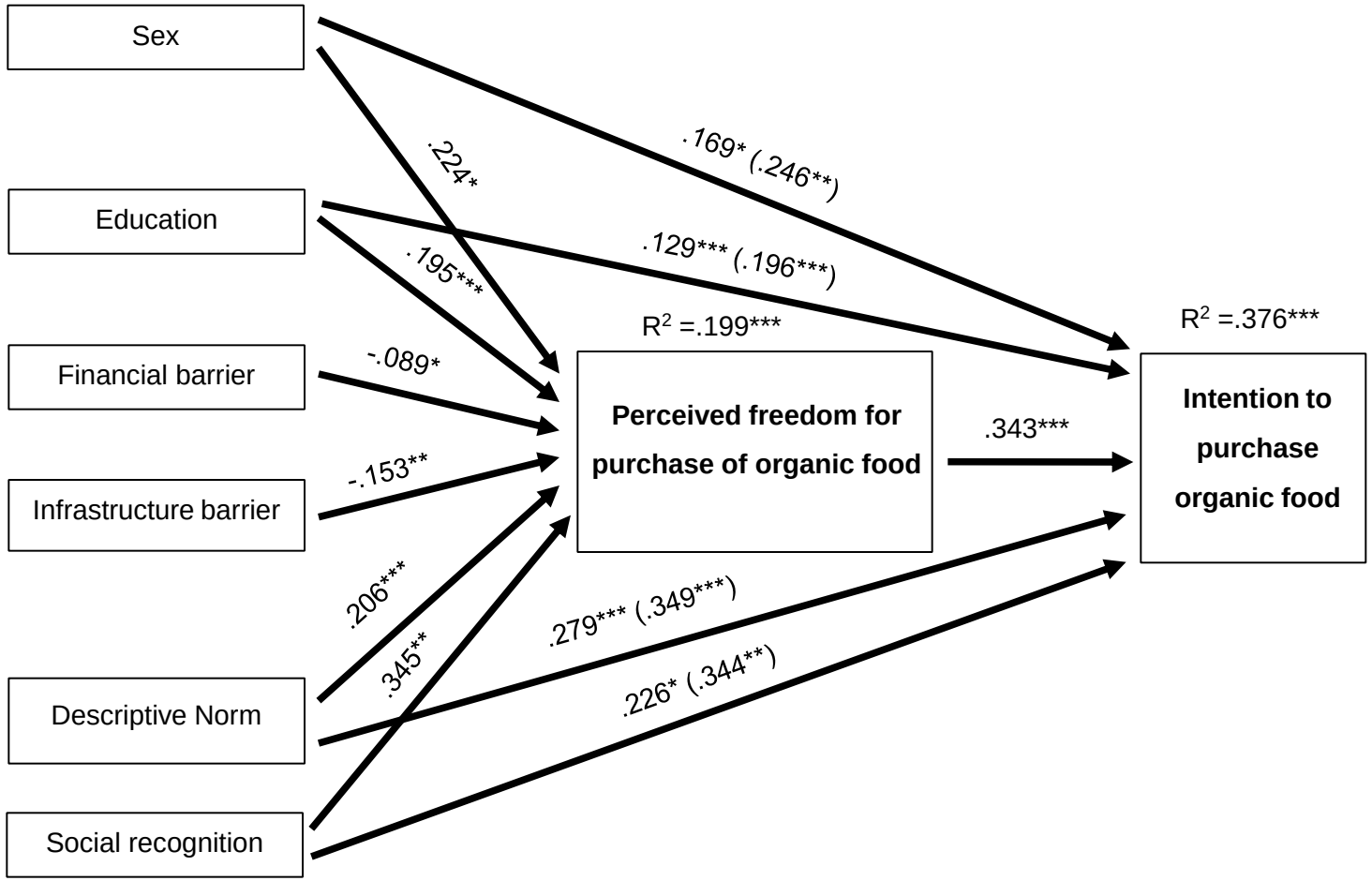
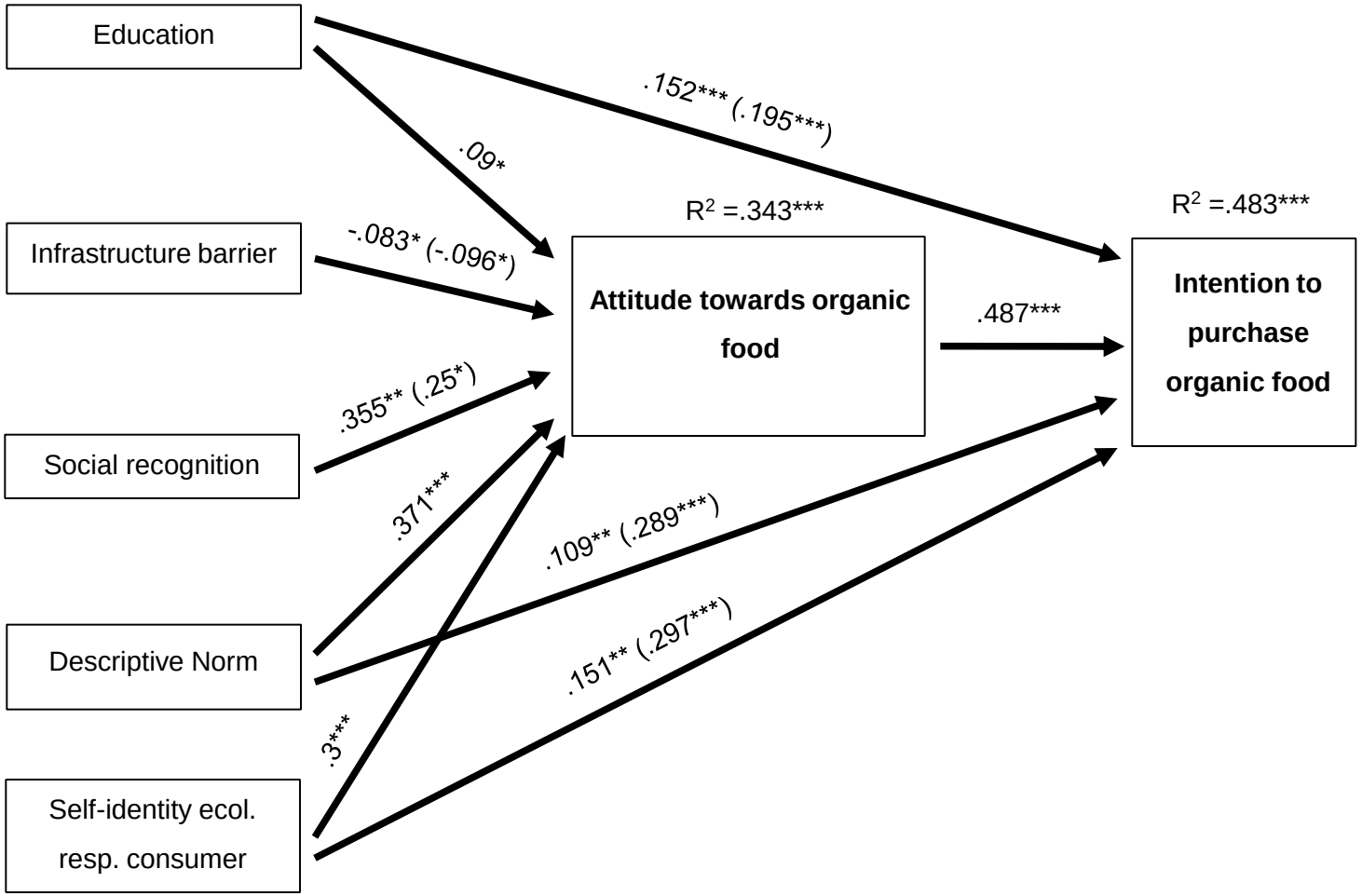
III Purchase organic food: Empirical model I



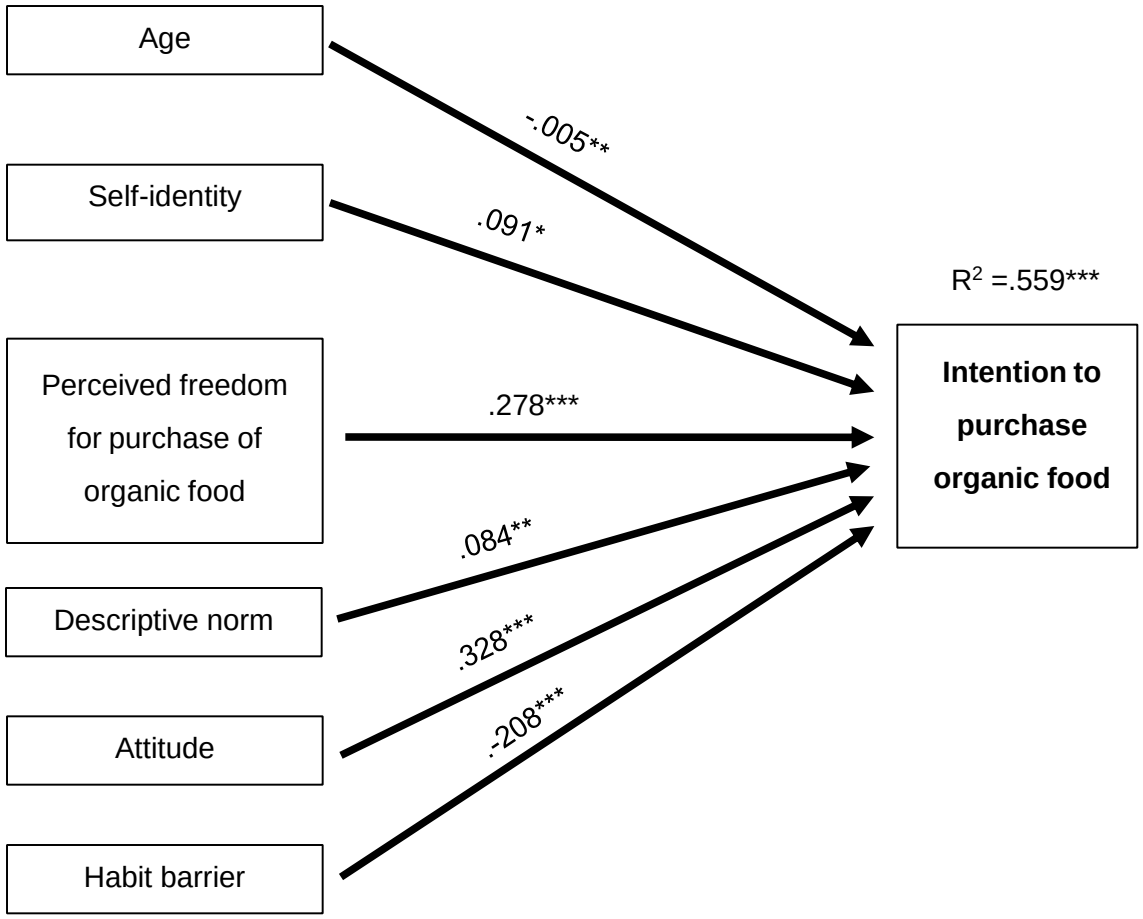
*** p < .001 ** p < .01 * p < .05

III Purchase organic food: Empirical model II



*** p < .001 ** p < .01 * p < .05

III Purchase organic food: Empirical model III



*** p < .001 ** p < .01 * p < .05

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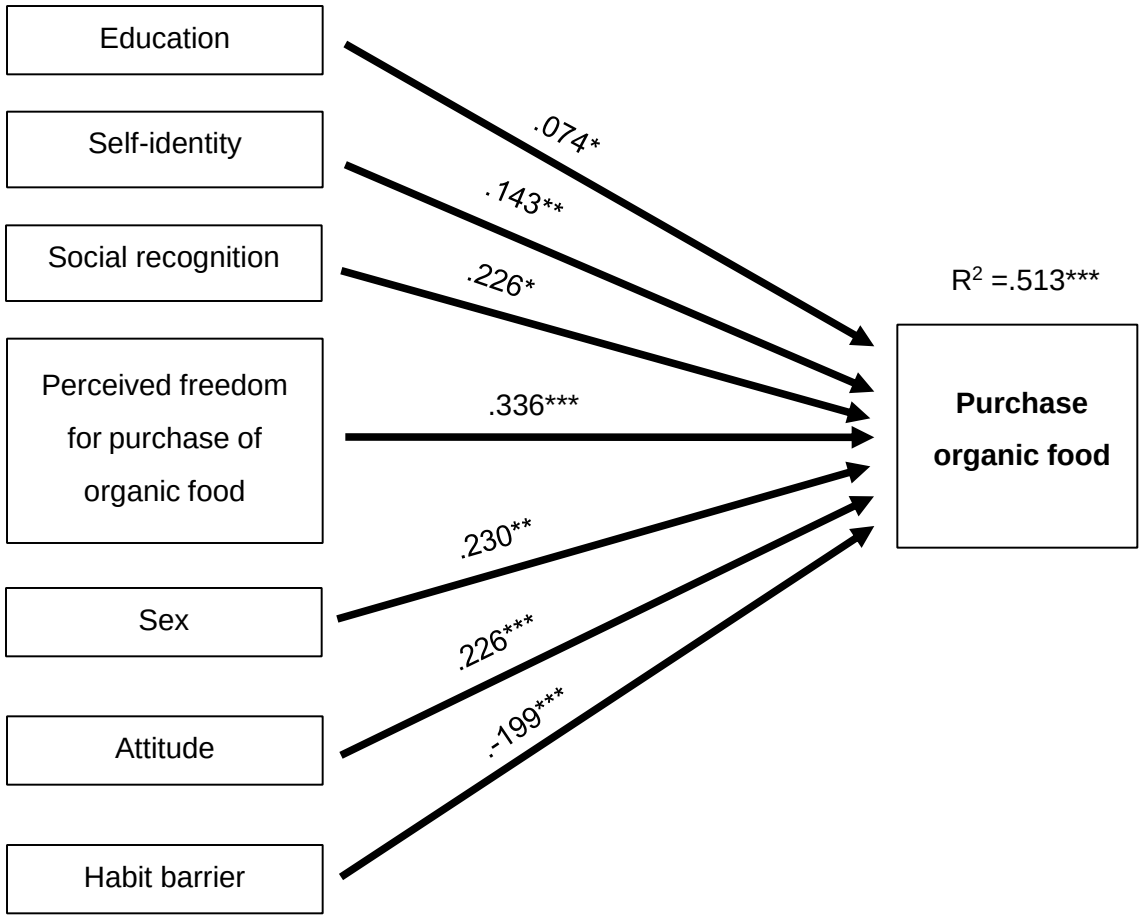
III Purchase organic food: Empirical model IV



*** p < .001 ** p < .01 * p < .05

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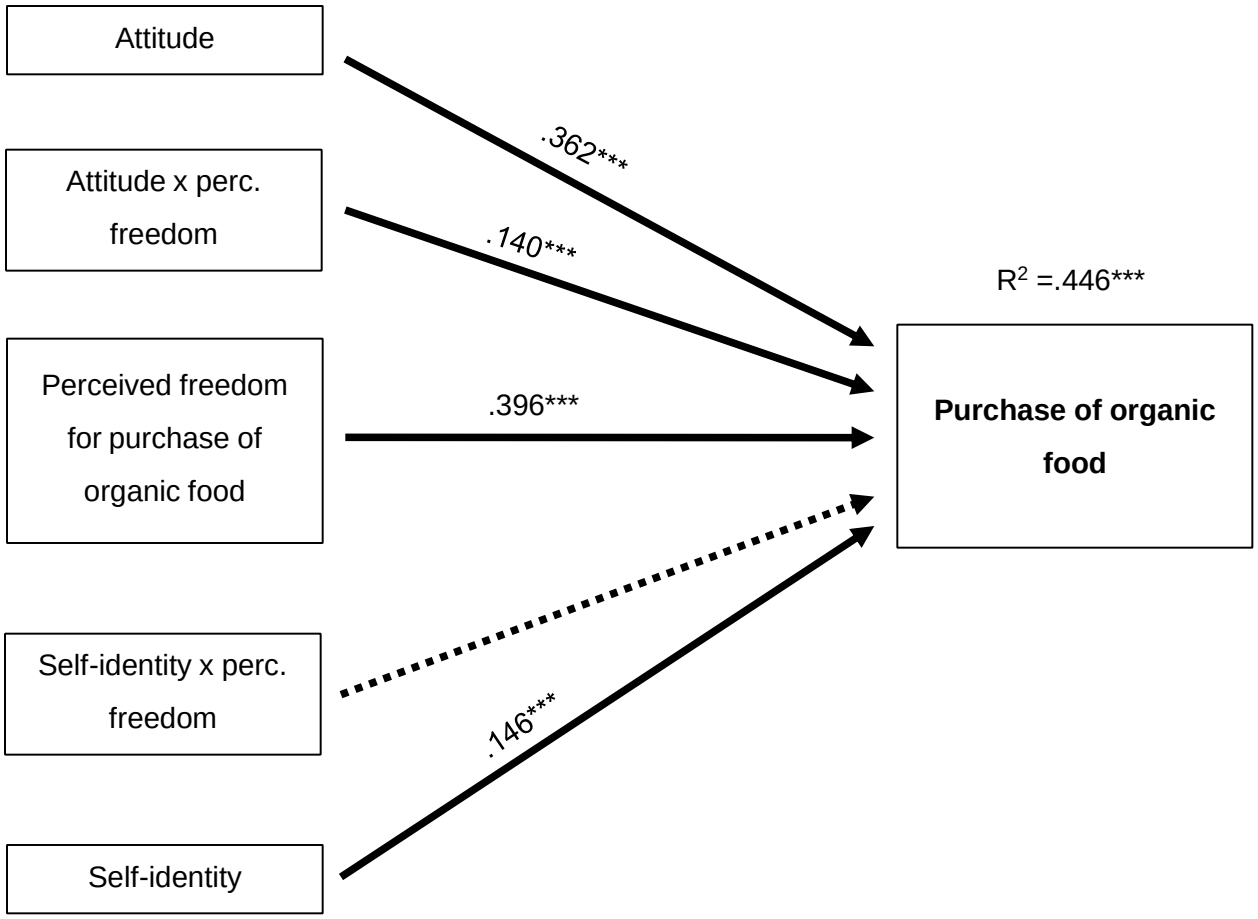
III Moderation analysis purchase organic food



*** p < .001

III Summary Purchase organic food

- Direct effects of education (+), attitude (+), self-identity (+), perceived freedom (+), sex (+), social recognition (+) and habit (-) on purchase behaviour
- Comparable results for intentions → but no direct effects of sex and social recognition (instead effect of descript. Norm)

- Effects of education (+), sex (+), descriptive norm (+), social recognition (+) and infrastructure & financial barriers (-) on intentions are mediated by perceived freedom

- Effects of education (+), self-identity (+), descriptive norm (+), social recognition (+) and infrastructure

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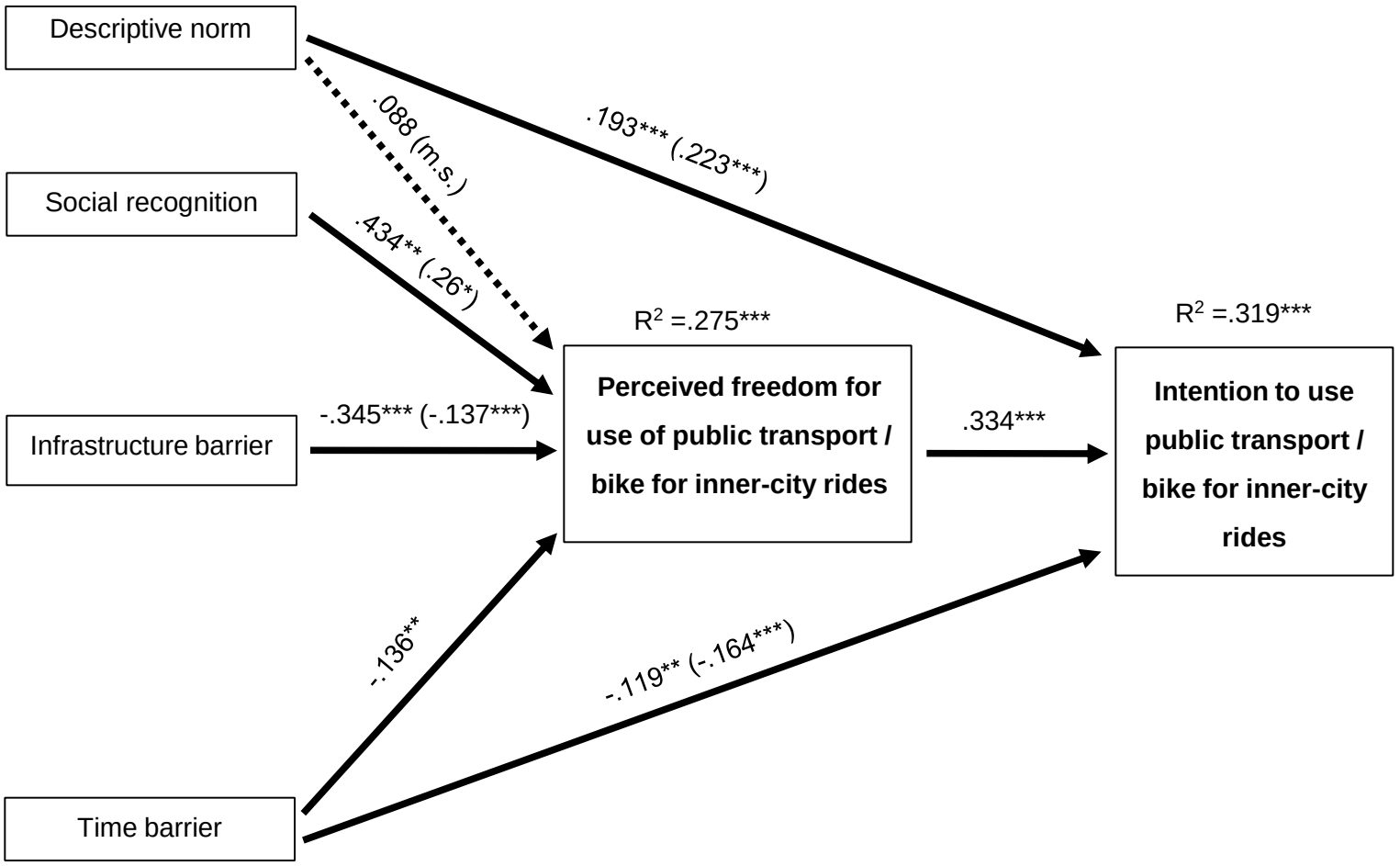
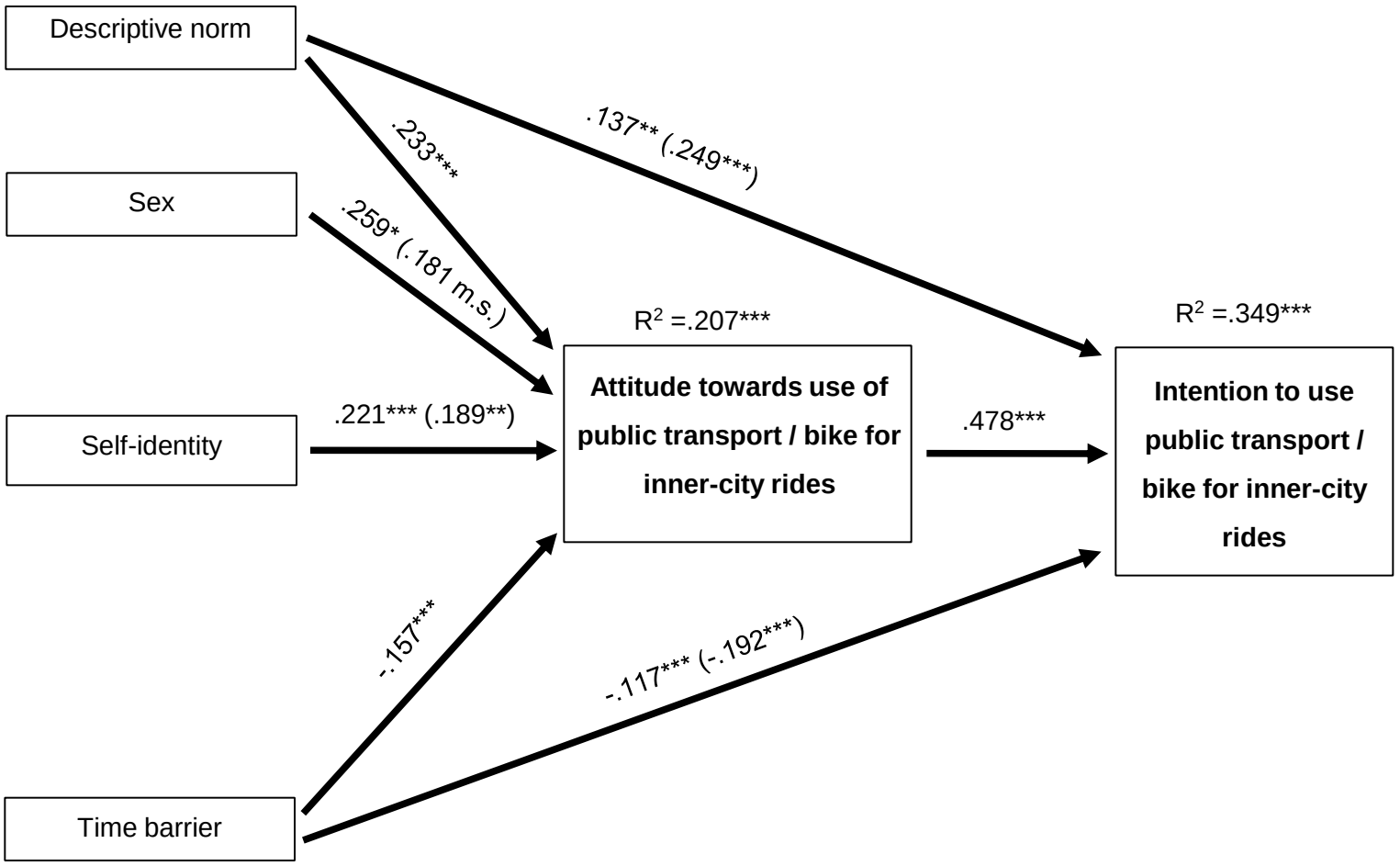
III Use public transport / bike: Empirical model I



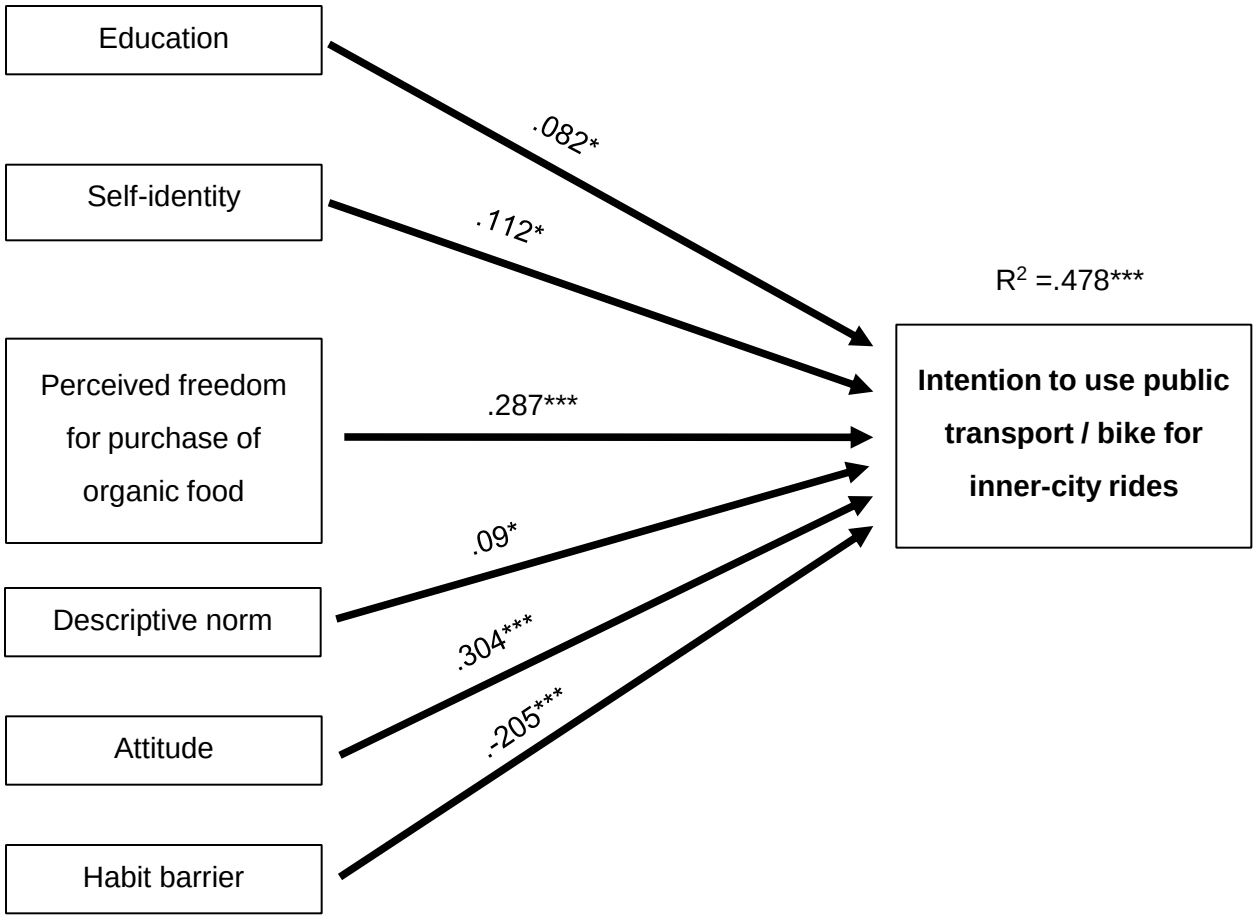
*** p < .001 ** p < .01 * p < .05

III Use public transport / bike: Empirical model II



*** p < .001 ** p < .01 * p < .05

III Use public transport / bike: Empirical model III



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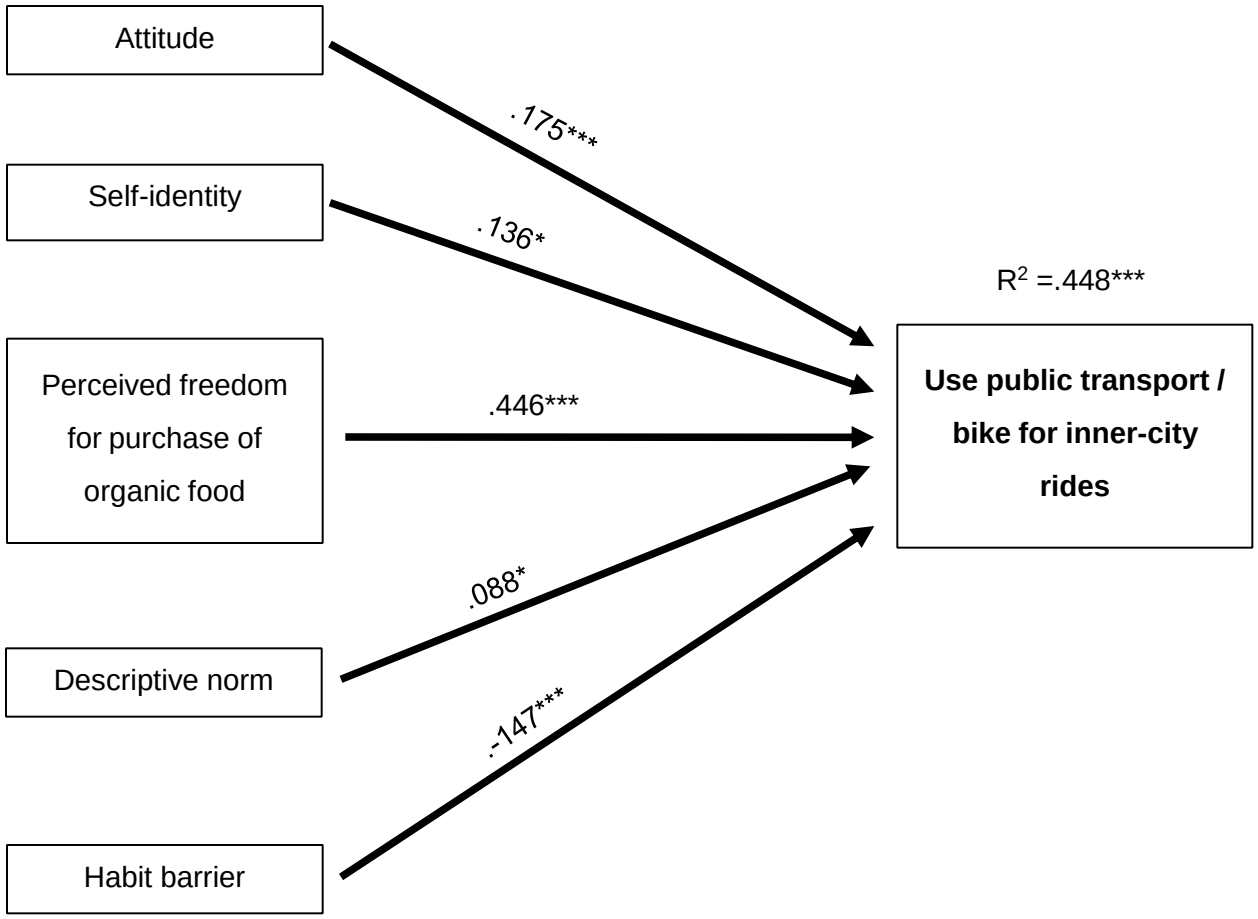
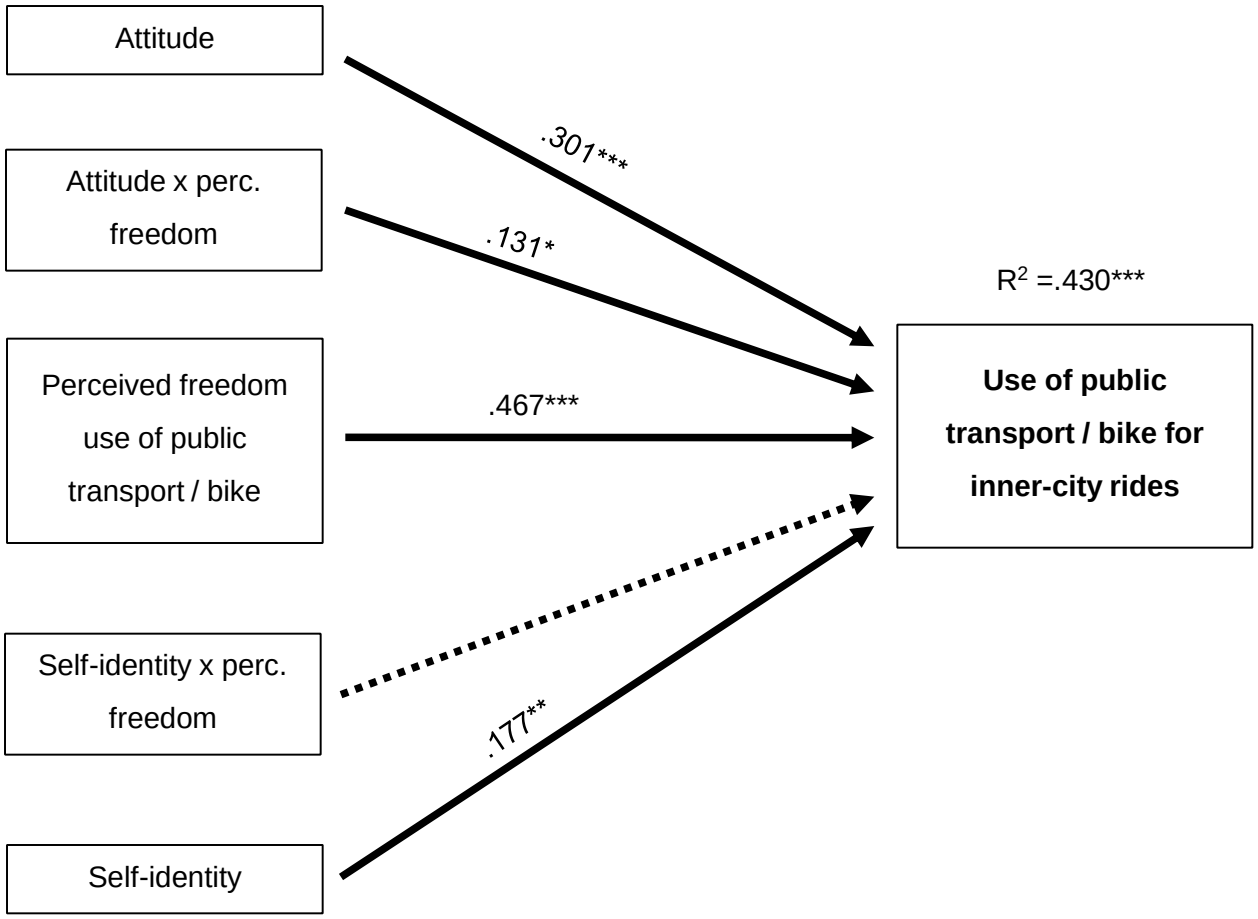
III Use public transport / bike: Empirical model III



*** p < .001 ** p < .01 * p < .05

III Moderation analysis use of public transport



*** p < .001 ** p < .01 * p < .05

III Summary Use of public transport / bike

- Direct effects of attitude (+), self-identity (+), perceived freedom (+), descriptive norm (+) and habit (-) on inner-city mobility behaviour
- Comparable results for intentions → but additional direct effects of education (+)

- Effects of descriptive norm (+), social recognition (+) and time & financial barriers (-) on intentions are mediated by perceived freedom to use public transport / bike

- Effects of sex (+), self-identity (+), descriptive norm (+), and time barrier (-) on intentions are mediated by attitudes towards public transport / bike

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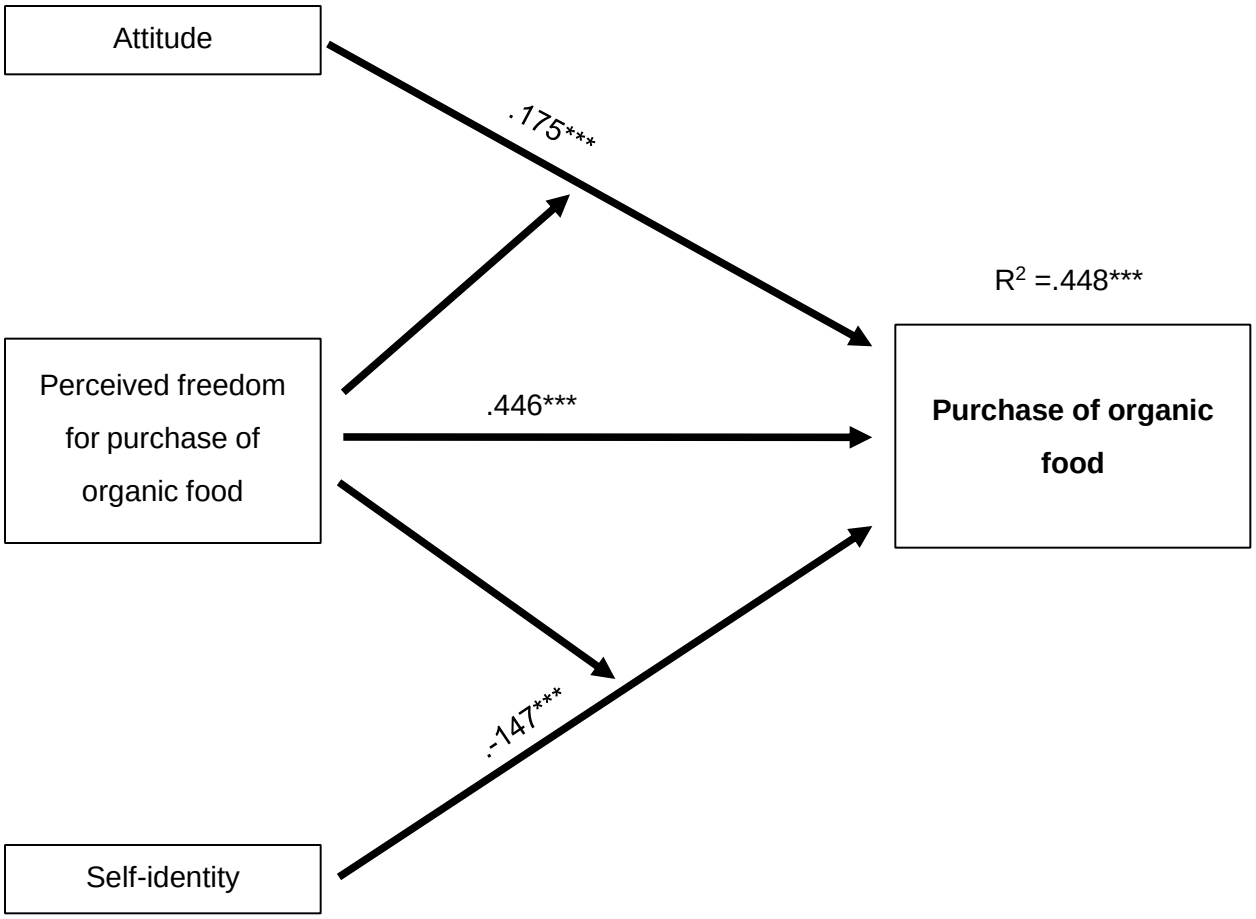
III Moderation analysis I



*** p < .001 ** p < .01 * p < .05

IV Key points / Discussion

Standardized regression coefficients

DV \ IV	Attitude	Desc. norm	Perceiv. freedom	Self-identity	Habit barrier	Age	Sex	Social Recognition	Education
Intention purch. organic food[a]	.332	.087	.291	.071	-.254	-.068			
Behav. organic food[b]	.225		.344	.111	-.237		.093	.077	.07

[a] R^2= .559 [b] R^2= .513

IV Key points / Discussion

Standardized regression coefficients

IV DV	Attitude	Desc. norm	Perceiv. freedom	Self-identity	Habit barrier	Age	Education
Intention use public transp./ bike[a]	.278	.093	.320	.081	-.251		.077
Behav. use public transp./ bike[b]	.150	.087	.473	.093	-.169		

[a] R^2= .478 [b] R^2= .448

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III Key points / Discussion

- Perceived freedom to purchase organic food / use public transport & bike as strongest predictor of the two pro-environmental behaviours (other strong predictors are attitudes and habits)

- Perceived freedom (partly) mediates effects of descriptive norms, social recognition and socio-demographic variables

- Moderator effects of perceived freedom and attitudes / self-identity (positive interaction) illustrates the importance of freedom / autonomy for pro-environmental behaviours → possible further research to self-determination theory (intrinsic motivation) and

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